

R. Brady,

Carving Sheet-Metal.

N^o 14,049.

Patented Jan. 8, 1856.

Fig. 2.

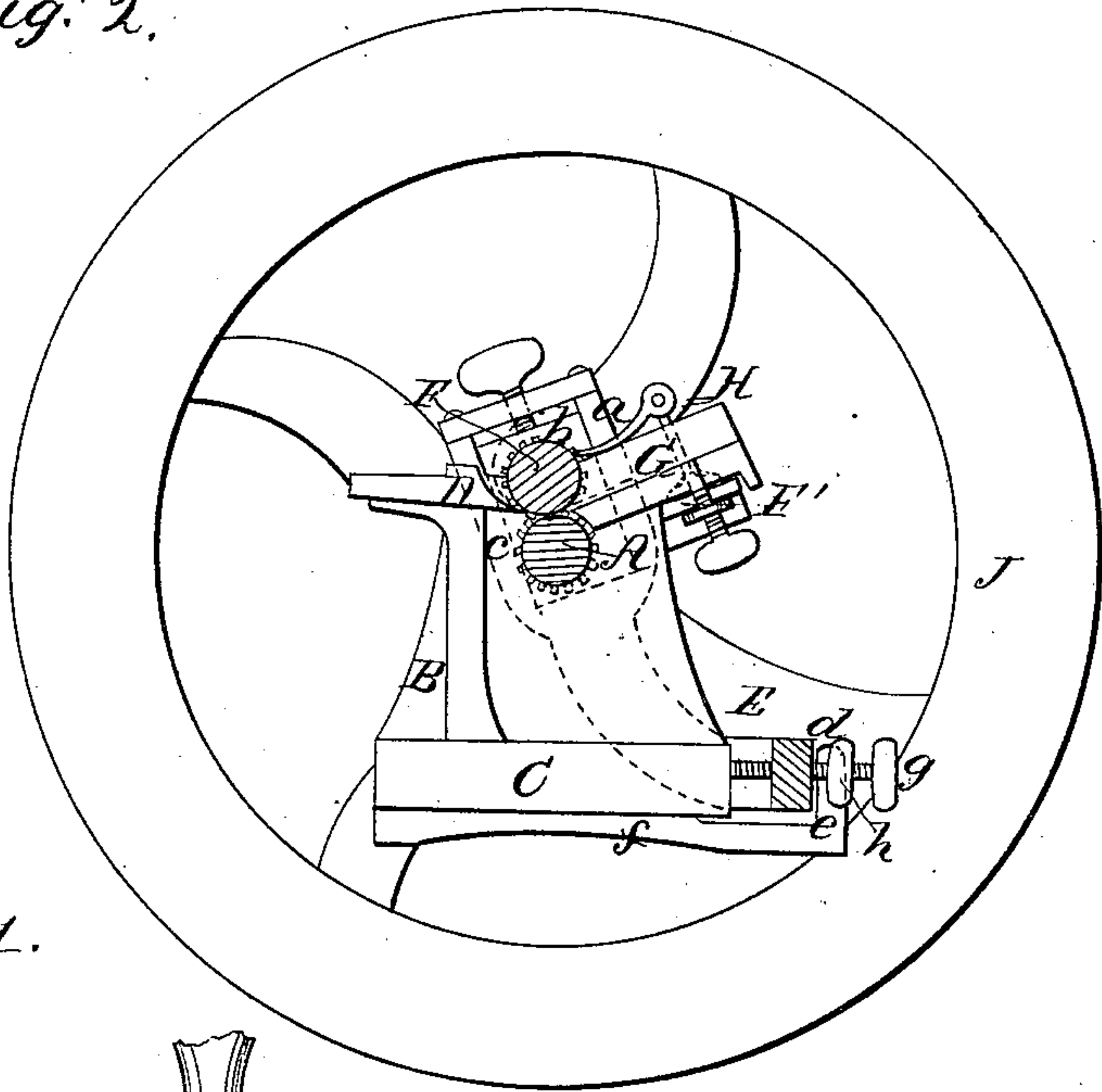
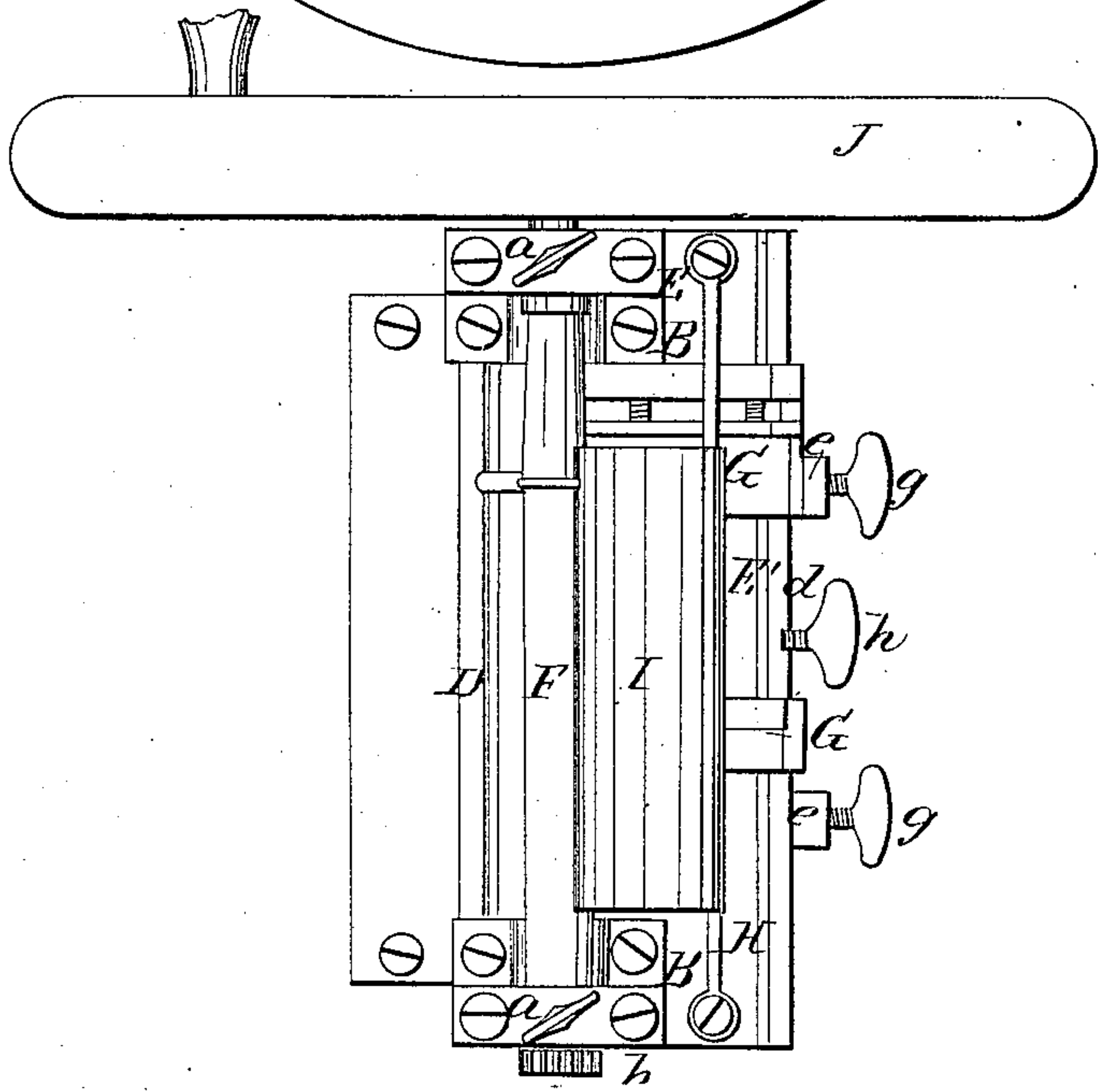


Fig: 1.



UNITED STATES PATENT OFFICE.

REUBEN BRADY, OF NEW YORK, N. Y.

IMPROVED MACHINE FOR SHEET-METAL BENDING.

Specification forming part of Letters Patent No. 14,049, dated January 8, 1856.

To all whom it may concern:

Be it known that I, REUBEN BRADY, of the city, county, and State of New York, have invented a new and Improved Machine for Forming the Sides or Bodies of Cylindrical Sheet-Metal Boxes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a plan or top view of my improvement. Fig. 2 is a transverse vertical section of the same, the plane of section being through the center.

Similar letters of reference indicate corresponding parts in the two figures.

The nature of my invention consists in the employment or use of two rollers, one of which is placed in permanent bearings, and the other in an adjustable or swinging frame, to which the guide-feeding plates are attached. A stationary concave bed is also employed, and the above parts arranged and operating, as shown, so as to bend sheet-metal plates in cylindrical form as they are passed between the rollers.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, Fig. 2, represents a metallic roller, which works in suitable bearings on the upper ends of uprights B B, which are attached to a bed-piece, C.

D represents a concave metallic bed, which is secured to the uprights B B, the inner edge of said bed being about on a level with the upper edge of the roller A. The bed D and roller A are permanent and always have the same relative position with each other.

E represents a frame, the sides or ends *a* of which are fitted on the ends of the roller A, so that said frame may work, swing, or turn on said roller. In the sides or ends of the frame E there are placed bearings, in which the ends of a roller, F, are fitted, and one end of this roller F extends beyond the outer side of the bearing, and has a pinion, *b*, upon it, said pinion gearing into a pinion, *c*, which is placed on the end of the roller A, one end of which also extends through or beyond one side or end, *a*, of the frame E. The lower ends of the sides *a* of the frame E are curved, and are connected by a cross-piece, *d*, which is opposite one side of the bed-piece C.

The cross-piece *d* is fitted between the side of the bed-piece and lips *e e*, which are at the ends of arms *f*, connected with the under side of the bed-piece. Through each lip *e* a set-screw, *g*, passes, and a set-screw, *h*, passes through the center of the cross-piece *d*. The end of the screw *h* bears against the side of the bed-piece C, and the ends of the screws *g* bear against the outer side of the cross-piece *d*.

To the sides or ends *a* of the frame E there are attached the ends of a plate, F', on which guide or feeding plates G are secured. These plates may be adjusted the required distance apart, according to the width of the metal plates to be bent or curved.

H is a rod attached to the plate F, and having a concave apron or shield, I, attached to it. The inner edge of this apron or shield bears against or upon the upper roller, A.

To one end of the roller A a fly-wheel, J, is attached.

The sheets of metal are cut the proper width and the plates G adjusted the required distance apart on the plate F. Motion is then given the roller A in any proper manner, and the metal sheets are passed between the rollers, and as it comes in contact with the bed D will be curved or bent in cylindrical form. The apron or shield prevents the curved sheets from coming in contact with the operator, and causes them to fall off the opposite side of the machine.

Cylinders of larger or smaller diameter are obtained by adjusting the frame E by means of the set-screws *h g g*. When the roller F is placed near the bed D, the cylinders will be small, and they will be proportionably increased in size as said roller is moved back from the bed. The guide or feeding plates are also more inclined when the roller F is placed near the bed, and this serves to diminish the size of the cylinders, it being understood that said plates are attached to the frame E.

I am aware that two rollers and a concave bed have been and now are used for the same purpose; but the rollers are fitted in permanent bearings, and the concave bed rendered adjustable. This arrangement renders the adjustment of the parts, so as to vary the diameters of the cylinders, somewhat inconvenient, for the feeding or guide plates require to be adjusted separately from the bed.

The implement is also more complicated, and does not act as well in practice as my improvement.

I do not claim the concave bed and rollers, therefore, irrespective of the arrangement herein described; but

I claim—

Placing the upper roller, F, in an adjustable or swinging frame, E, and attaching the guide

or feeding plates G G to said frame, when the above parts are used in connection and operate conjointly with the permanent roller A and concave bed D, for the purpose specified.

REUBEN BRADY.

Witnesses:

JOS. GEO. MASON,
WM. TUSCH.